Engineering and Testing for EMC and Safety Compliance

CLASS II PERMISSIVE CHANGE TEST REPORT

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MODEL: OpenSky M-803 Mobile Radio

FCC ID: BV8M803M

August 8, 2006

Standards Referenced for this Report	
FCC Part 2: 2005	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
FCC Part 15: 2005	§15.109: Radiated Emissions Limits
FCC Part 90: 2005	Private Land Mobile Radio Services
ANSI TIA-603-C-2004	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
ANSI/TIA/EIA – 102.CAAA; 2004	Digital C4FM/CQPSK Transceiver Measurement Methods

Frequency Range (MHz)	Maximum Conducted Power Output (W)	Frequency Tolerance Limit (ppm)	Emission Designator
806-824	25.9	1.5	11K8F1E
806-824	25.9	1.5	11K8F1D
821-824	25.9	1.5	14K0F3E
866-869	18.4	1.5	14K0F3E
806-821	25.9	1.5	16K0F3E
851-866	22.5	1.5	16K0F3E
806-824	25.9	1.5	8K4F1D
806-824	25.9	1.5	8K4F1E
851-869	22.5	1.5	8K4F1D
851-869	22.5	1.5	8K4F1E

REPORT PREPARED BY TEST ENGINEER: DANIEL BIGGS

Document Number: 2006089/QRTL06-258A

Table of Contents

Table of Figures

Table of Tables

Table of Plots

Table of Appendices

Table of Photographs

1 General Information

The following Class II Permissive Change report is prepared on behalf of **M/A-COM, Inc**. in accordance with the Federal Communications Commission Rules and Regulations. The Equipment Under Test (EUT) was the **OpenSky M-803M Mobile Radio; FCC ID: BV8M803M**. The test results reported in this document relate only to the item that was tested.

All measurements contained in this application were conducted in accordance with FCC Rules and Regulations CFR 47, Part 90, and ANSI/TIA/EIA 603-2004, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards. Calibration checks are performed regularly on the instruments, and all accessories including high pass filter, coaxial attenuator, preamplifier and cables.

1.1 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the parking lot of Rhein Tech Laboratories, Inc. 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170. This site has been fully described in a report submitted to and approved by the Federal Communications Commission to perform AC line conducted and radiated emissions testing.

1.2 Related Submittal(s)/Grant(s)

This is a Class II Permissive Change report for FCC ID: BV8M803M, originally certified October 15, 2001. Previous Class II permissive change grants were issued on June 3, 2003, October 6, 2004, February 24, 2005 and October 26, 2005.

1.3 Description of Change in Device

The PA board assembly has been replaced with a new board assembly design, the result of PA module component availability and end-of-life. The component is no longer available.

1.4 Product Description

The EUT is a mobile radio that operates in the 800 MHz SMR and NPSPAC frequency bands. The rated RF output power is programmable to 25.0 watts.

Trade Name	OpenSky M-803 Mobile Radio
Use of Product	Voice and Data communications
Type Modulation	GFSK, FM
Bit Rate	19200 and 9600 bps
Max. Deviation	5 kHz
RF Output	25 W programmable
Frequency Range	806-824 MHz and 851-869 MHz
Max. Number of Channels	830 Normal, 830 Talk Around
Antenna(e) Gain	0 dBi and 3 dBi (detachable)
External Input	Audio and Digital

2 Tested System Details

The EUT was received for testing on July 26, 2006. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable. There are multiple configurations of the M-803 Mobile Radio series. Model number MAMROS0004, Dash Mount Mobile Radio Unit Half Duplex with GPS System, was provided for testing.

Table 2-1: Equipment Under Test (EUT)

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
Mobile Radio	M/A-Com, Inc.	M-803	MAMROS0004	BV8M803M	17411
Control Head	M/A-Com, Inc.	CH-103	MACDOS0003	N/A	17413
Microphone	Otto	N/A	LS102824V10	N/A	16501
Antenna	M/A-Com, Inc.	ASPA	1860	N/A	N/A
Antenna	M/A-Com, Inc.	D2AN1R	19B209568P6	N/A	N/A

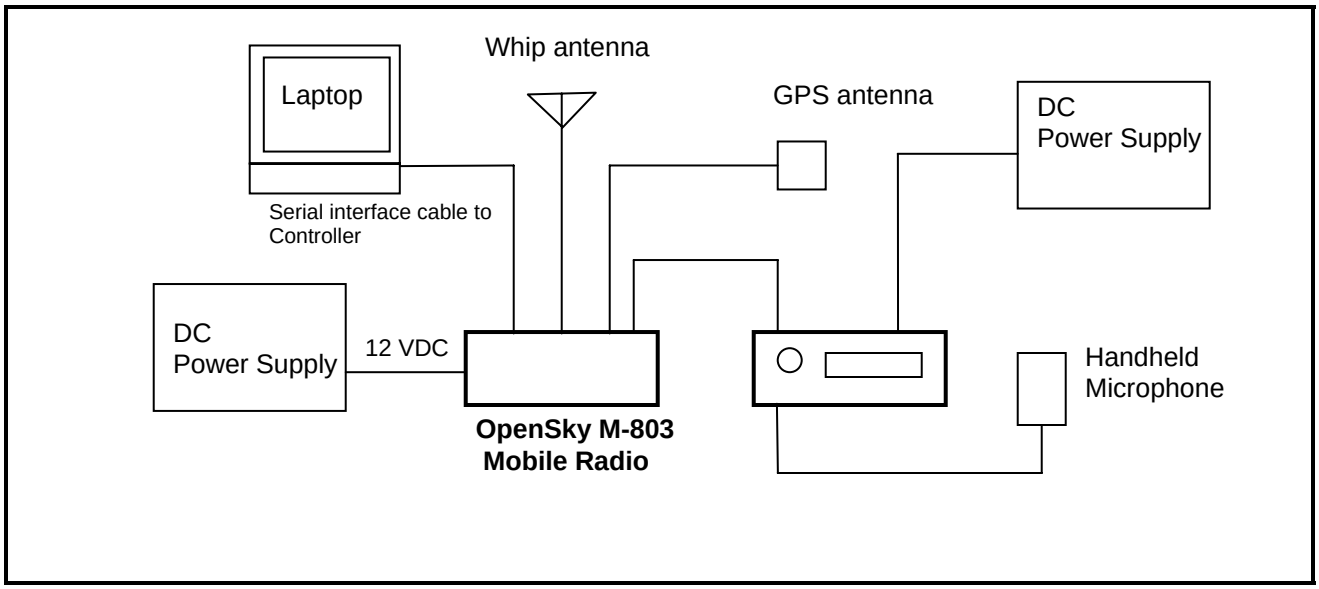
Table 2-2: Ports and Cabling (EUT)

Port	Manufacturer	PN/SN	Port/Cable Type	Quantity	Length (feet)	Shield	RTL Bar Code
DC Power	M/A Com	MAMROS0075-N1210	14 AWG	1	3	No	17415
DC Power	M/A Com	MAMROS0075-R1210	14 AWG	1	3	No	17416
RF output	N/A	N/A	Mini UHF	1	N/A	N/A	N/A
RS-232	N/A	N/A	DB-9	1	N/A	N/A	N/A
GPS	N/A	N/A	SMA	1	N/A	N/A	N/A

Table 2-3: Support Equipment

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
Notebook Computer	Panasonic	CF-28 Toughbook	N/A	N/A	13954
RS-232 Interface Cable	N/A	DB-9	N/A	N/A	N/A
Power Supply	Instek	PSS 3203	N/A	N/A	N/A
Power Supply	Alinco	DMV330MV	N/A	N/A	901438

Figure 2-1: Configuration of Tested System



3 FCC Rules and Regulations Part 2 §2.1033(C)(8): Voltages and Currents Through the Final Amplifying Stage

Nominal DC Voltage: 13.8 VDC
Current: 9 AMPS

4 FCC Rules and Regulations Part 2 §2.1046(a): RF Power Output: Conducted

4.1 Test Procedure

ANSI TIA-603-C-2004, Section 2.2.1.

The EUT was connected to a coaxial attenuator having a 50 Ω load impedance.

4.2 Test Data

Table 4-1: RF Power Output (High Power): Carrier Output Power (Unmodulated)

Channel	Frequency (MHz)	RF Power Measured (Watt)*
A001N	806.0125	25.1
A300N	813.4875	25.4
A415N	816.3635	25.5
A600N	820.9875	25.7
A601N	821.0125	25.7
A715N	822.5125	25.8
A830N	823.9875	25.9
A001T	851.0125	22.5
A300T	858.4875	20.2
A415T	861.3635	19.5
A600T	865.9875	18.3
A601T	866.0125	18.4
A715T	867.5125	18.1
A830T	868.9875	17.8

* Measurement accuracy: +/- .02 dB (logarithmic mode)

Table 4-2: RF Power Output (Rated Power)

Rated Power (W)
25

Table 4-3: Test Equipment for Testing RF Power Output - Conducted

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due
901184/901186	Agilent	E4416A/E9323A	Power Meter/ Sensor	GB41050573/ US420.52510380	09/21/05
901396	Weinschel	48-40-34	40 dB attenuator	BN9803	01/13/09

TEST PERSONNEL:

Daniel Biggs		July 27, 2006
Test Technician/Engineer	Signature	Date Of Test

5 FCC Rules and Regulations Part 90 §90.210 and Part 2 §2.1051: Spurious Emissions at Antenna Terminals

5.1 Test Procedure

ANSI TIA-603-C-2004, Section 2.2.13.

The transmitter is terminated with a 50 Ω load and interfaced with a spectrum analyzer.

Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 19200 bps for OTP mode and 9600 bps for P25 mode.

Device with analog modulation: The transmitter is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of the rated system deviation at 1,000 Hz.

5.2 Test Data

Frequency range of measurement per Part 2.1057: 9 kHz to 10xFc.

Limit: P(dBm) – (43 + 10xLOG P(W))

The worst case (unwanted emissions) channels are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

Table 5-1: Conducted Spurious Emissions – Channel A001N – High Power

12.5 kHz channel spacing; Conducted power = 25.1 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1612.025	83.49	57.00	-26.49
2418.038	86.14	57.00	-29.14
3224.050	76.16	57.00	-19.16
4030.063	77.90	57.00	-20.90
4836.075	92.08	57.00	-35.08
5642.088	87.99	57.00	-30.99
6448.100	85.95	57.00	-28.95
7254.113	90.64	57.00	-33.64
8060.125	84.39	57.00	-27.39

Table 5-2: Conducted Spurious Emissions – Channel A830N – High Power

12.5 kHz channel spacing; Conducted power = 25.9 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1647.975	78.73	57.13	-21.60
2471.963	83.38	57.13	-26.25
3295.950	77.80	57.13	-20.67
4119.938	85.04	57.13	-27.91
4943.925	93.72	57.13	-36.59
5767.913	87.83	57.13	-30.70
6591.900	83.79	57.13	-26.66
7415.888	91.78	57.13	-34.65
8239.875	84.23	57.13	-27.10

Table 5-3: Conducted Spurious Emissions – Channel A001T – High Power

12.5 kHz channel spacing; Conducted power = 22.5 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1702.025	80.01	56.52	-23.49
2553.038	86.76	56.52	-30.24
3404.050	83.18	56.52	-26.66
4255.063	79.82	56.52	-23.30
5106.075	95.40	56.52	-38.88
5957.088	87.51	56.52	-30.99
6808.100	83.67	56.52	-27.15
7659.113	89.16	56.52	-32.64
8510.125	85.41	56.52	-28.89

Table 5-4: Conducted Spurious Emissions – Channel A600T – High Power

12.5 kHz channel spacing; Conducted power = 18.4 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1731.975	80.93	55.65	-25.28
2597.963	84.38	55.65	-28.73
3463.950	82.30	55.65	-26.65
4329.938	80.34	55.65	-24.69
5195.925	87.72	55.65	-32.07
6061.913	84.53	55.65	-28.88
6927.900	80.39	55.65	-24.74
7793.888	86.48	55.65	-30.83
8659.875	85.23	55.65	-29.58

Table 5-5: Conducted Spurious Emissions – Channel A830T - High Power

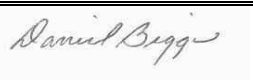
12.5 kHz channel spacing; Conducted power = 17.8 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1737.975	82.00	55.50	-26.50
2606.963	84.55	55.50	-29.05
3475.950	80.77	55.50	-25.27
4344.938	81.31	55.50	-25.81
5213.925	87.19	55.50	-31.69
6082.913	87.70	55.50	-32.20
6951.900	81.06	55.50	-25.56
7820.888	83.85	55.50	-28.35
8689.875	84.90	55.50	-29.40

Table 5-6: Test Equipment for Testing Conducted Spurious Emissions

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due
901020	Hewlett Packard	8564E	Portable Spectrum Analyzer (9 kHz - 40 GHz)	3943A01719	09/14/06
901396	Weinschel	48-40-34	40 dB attenuator	BN9803	01/13/09

TEST PERSONNEL:

Daniel Biggs		July 26, 2006
Test Technician/Engineer	Signature	Date Of Test

6 FCC Rules and Regulations Part 90 §90.210 and Part 2 §2.1053(a): Field Strength of Spurious Radiation

6.1 Test Procedure

ANSI TIA-603-C-2004, section 2.2.12.

Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 19200 bps for OTP mode and 9600 bps for P25 mode.

Device with analog modulation: The transmitter is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of the rated system deviation at 1,000 Hz.

The spurious emissions levels were measured and the device under test was replaced by a substitution antenna connected to a signal generator. This signal generator level was then corrected by subtracting the cable loss from the substitution antenna to the signal generator, and the gain of the antenna was further corrected to a half wave dipole.

6.2 Test Data

6.2.1 CFR 47 Part 90.210 Requirements

The worst-case emissions test data are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

Limit: P(dBm) – (43 + 10xLOG P(W))

Table 6-1: Field Strength of Spurious Radiation - Channel A415N - High Power

Limit = 43 + 10 Log P = 57.06 dBc Conducted Power = 44.06 dBm = 25.5 W

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1632.7	48.0	-24.0	4.4	6.4	66.0	-8.9
2449.1	61.2	-41.5	4.8	7.2	83.1	-26.0
3265.4	56.2	-42.6	5.6	7.3	84.8	-27.7
4081.8	55.7	-41.8	5.9	7.4	84.1	-27.0
4898.1	50.2	-42.3	5.7	8.6	83.3	-26.2
5714.5	47.5	-42.5	7.6	8.7	85.1	-28.0
6530.8	47.0	-44.7	8.4	9.5	87.3	-30.2
7347.2	51.8	-35.7	8.8	8.8	79.1	-22.0
8163.5	43.2	-41.6	8.9	8.9	85.4	-28.3

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

Table 6-2: Field Strength of Spurious Radiation - Channel A415T – High Power

Limit = 43 + 10 Log P = 55.9 dBc Conducted Power = 42.9 dBm = 19.5 W

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1722.7	41.7	-29.1	4.6	6.6	70.1	-14.1
2584.1	58.7	-43.0	5.3	7.5	83.8	-27.8
3445.5	56.8	-40.2	6.1	7.6	81.7	-25.7
4306.8	54.0	-33.3	6.0	8.3	73.9	-18.0
5168.2	54.8	-36.0	6.5	8.8	76.7	-20.7
6029.5	55.5	-35.0	7.9	9.3	76.6	-20.6
6890.9	48.5	-39.2	8.2	9.7	80.7	-24.7
7752.3	53.5	-32.7	9.1	8.8	76.0	-20.0
8613.6	41.3	-40.7	9.5	9.0	84.2	-28.2

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

Table 6-3: Test Equipment for Testing Field Strength of Spurious Radiation

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due
901053	Schaffner-Chase	CBL6112	Antenna (25 MHz – 2 GHz)	2648	09/20/06
900814	Electro-Metrics	EM-6961 (RGA-60)	Double Ridge Guide Antenna (1 - 18 GHz)	2310	4/19/08
900772	EMCO	3161-02	Horn Antennas (2 – 4 GHz)	9504-1044	5/20/07
900321	EMCO	3161-03	Horn Antennas (4 – 8 GHz)	9508-1020	5/20/07
900323	EMCO	3160-07	Horn Antennas (8.2 – 12 GHz)	9605-1054	8/2/06
900932	Hewlett Packard	8449B OPT H02	Preamplifier (1 - 26.5 GHz)	3008A00505	N/A
901020	Hewlett Packard	8564E	Portable Spectrum Analyzer (9 kHz - 40 GHz)	3943A01719	09/14/06
901422	Insulated Wire, Inc.	KPS-1503-2400-KPS	RF Cable, 20'	NA	12/12/06
901424	Insulated Wire Inc.	KPS-1503-360-KPS	RF Cable 36"	NA	12/12/06

TEST PERSONNEL:

Daniel Biggs	Daniel Biggs	July 27, 2006
Test Technician/Engineer	Signature	Date Of Test

7 FCC Rules and Regulations Part 90 §90.210(b, g, h): Emissions Masks and Part 2 §2.1049(c)(1): Occupied Bandwidth

7.1 Test Procedure

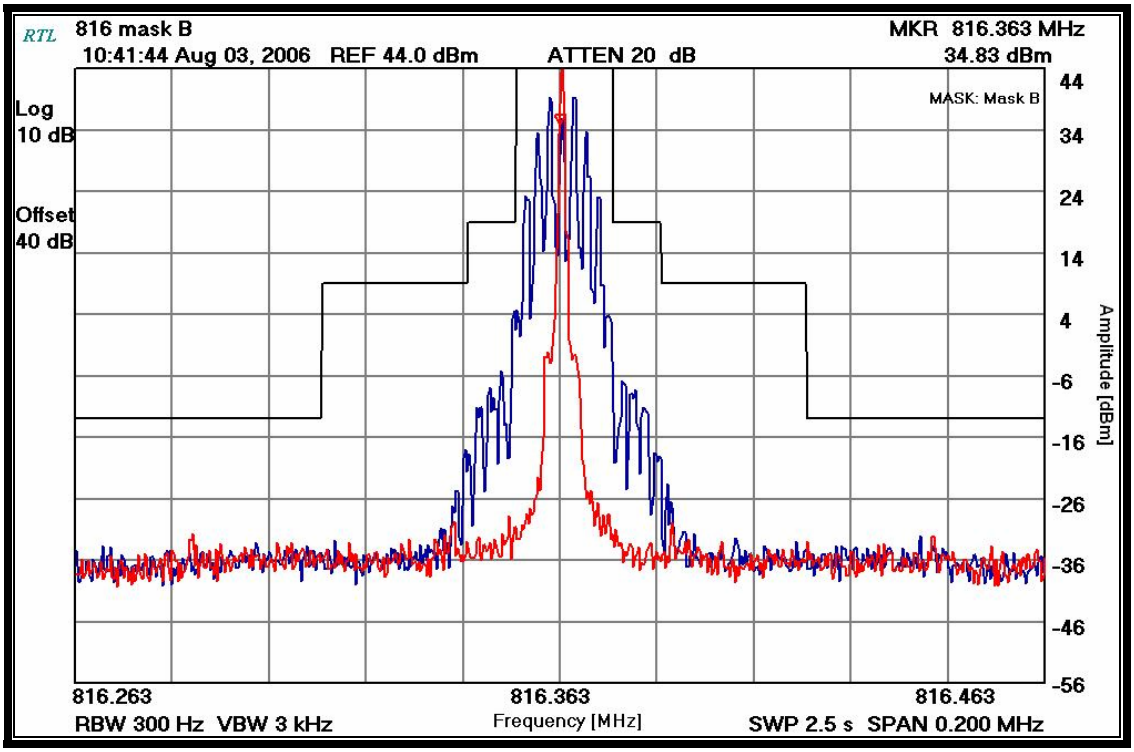
ANSI TIA-603-C-2004, Section 2.2.11.

Device with analog modulation: The transmitter is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of the rated system deviation at 1,000 Hz.

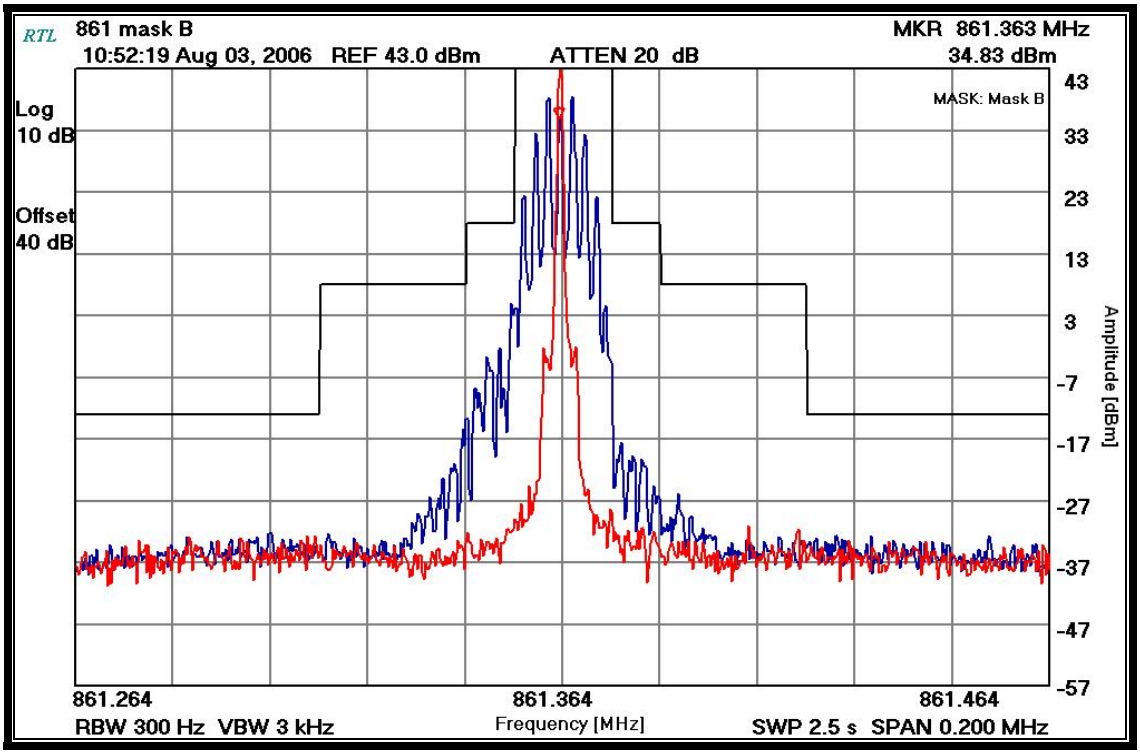
Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 19200 bps for OTP mode and 9600 bps for P25 mode.

7.2 Test Data

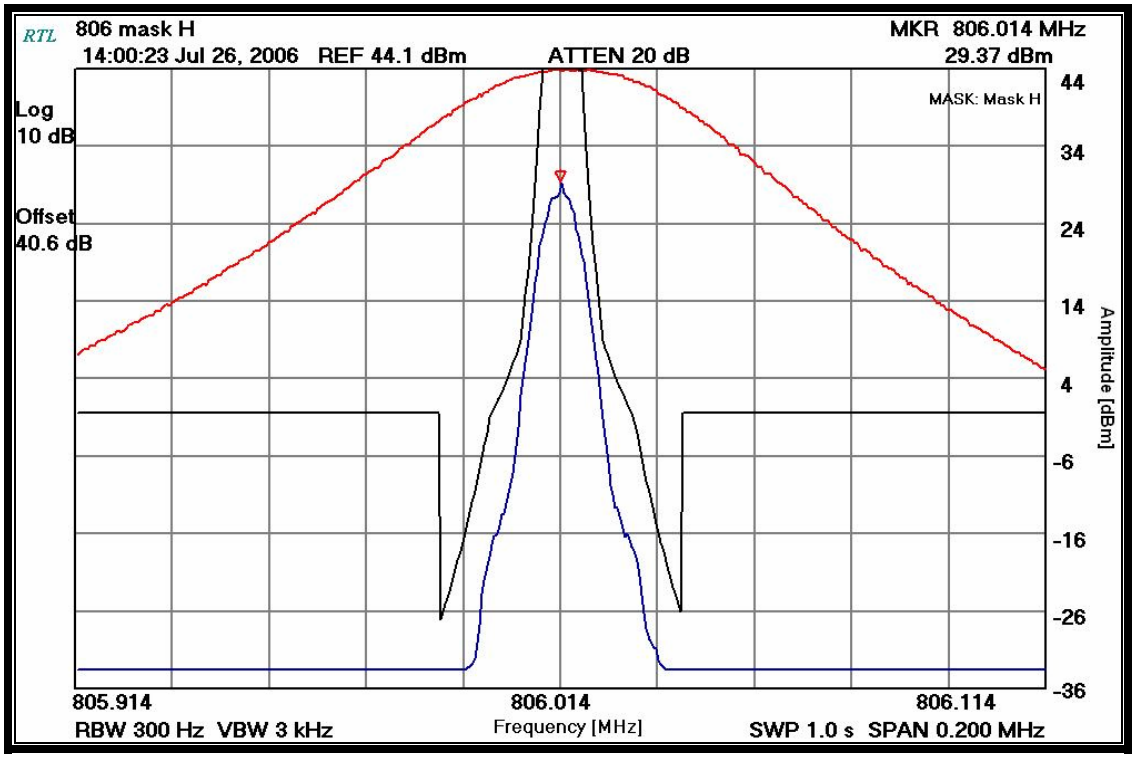
Plot 7-1: Occupied Bandwidth; Analog; Channel A415N – High Power



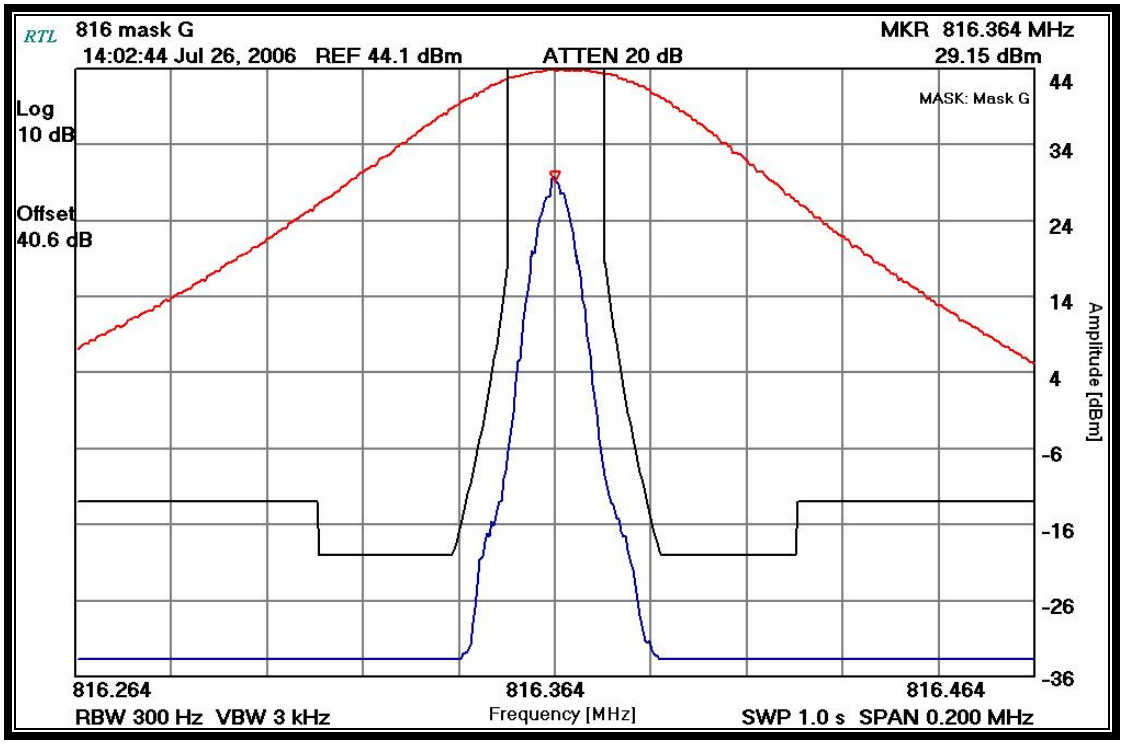
Plot 7-2: Occupied Bandwidth; Analog; Channel A415T – High Power



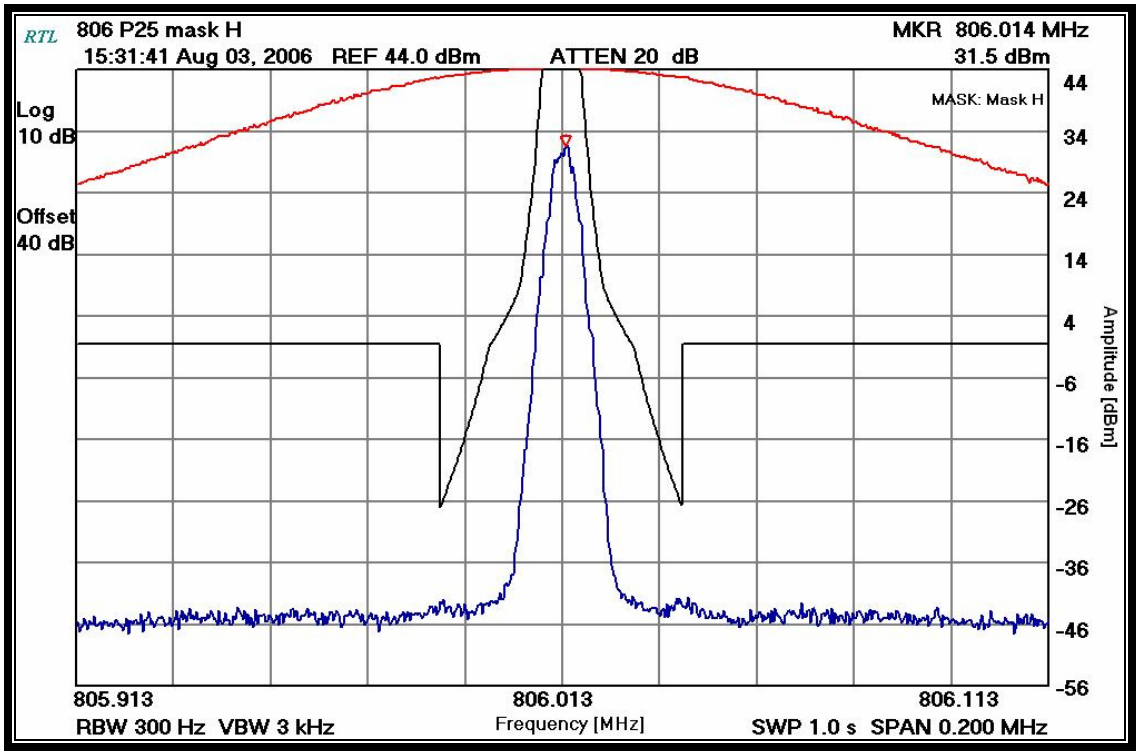
Plot 7-3: Occupied Bandwidth; OTP; Channel CH001



Plot 7-4: Occupied Bandwidth; OTP; Channel CH415



Plot 7-5: Occupied Bandwidth; P25; Channel D001N



Plot 7-6: Occupied Bandwidth; P25; Channel D415T

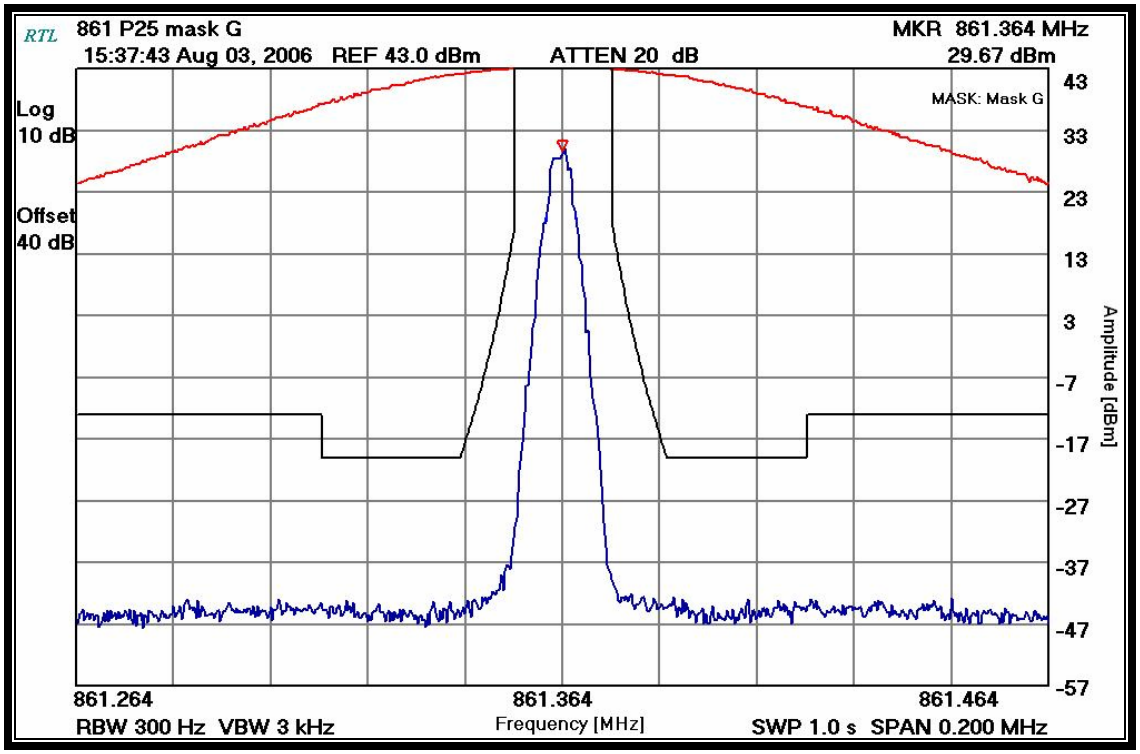


Table 7-1: Test Equipment for Testing Occupied Bandwidth

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due
901020	Hewlett Packard	8564E	Portable Spectrum Analyzer (9 kHz - 40 GHz)	3943A01719	09/14/06
901396	Weinschel	48-40-34	40 dB attenuator	BN9803	01/13/09

TEST PERSONNEL:

Daniel Biggs	Daniel Biggs	July 26 & August 3, 2006
Test Technician/Engineer	Signature	Dates Of Test

8 FCC Rules and Regulations Part 2 §2.202: Necessary Bandwidth and Emission Bandwidth

Type of Emission: F3E

OCF SMR Voice – 25 kHz channel spacing - (806-809/851-854 MHz)
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 5
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 16.0 kHz
Emission designator: 16K0F3E

OCF NPSPAC Voice – 12.5 kHz channel spacing - (809-824/854-869 MHz)
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 14K0F3E

Type of Emission: F1D, F1E

P25 – SMR -9600 bps:
Calculation:
Data rate in bps (R) = 9600
Peak deviation of carrier (D) = 1800
Bn = $[9600/\log_2(4) + 2 (1800) (1) = 8.400$ kHz
Emission designator: 8K4F1D, 8K4F1E

P25 – NPSPAC - 9600 bps:
Calculation:
Data rate in bps (R) = 9600
Peak deviation of carrier (D) = 1800
Bn = $[9600/\log_2(4) + 2 (1800) (1) = 8.400$ kHz
Emission designator: 8K4F1D, 8K4F1E

9 FCC Rules and Regulations Part 15 §15.109: Radiated Emissions Limits

9.1 Radiated Emissions Measurements

9.1.1 Site and Test Description

Before final radiated emissions measurements were made on the OATS, the EUT was scanned indoors at both one and three meter distances. This was done in order to determine its emission spectrum signal. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. This process was repeated during final radiated emission measurements on the OATS, at each frequency, in order to ensure that maximum emission amplitudes were measured.

Final radiated emissions measurements were made on the OATS at a distance of 3 meters. The EUT was placed on a nonconductive turntable at a height of 1 meter.

At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the emissions maximum levels. Measurements were taken using both horizontal and vertical antenna polarization. The spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the quasi-peak detection mode. No video filter less than 10 times the resolution bandwidth was used. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

9.1.2 Field Strength Calculations

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FI(dB\mu V/m) = SAR(dB\mu V) + SCF(dB/m)$$

FI = Field Intensity
SAR = Spectrum Analyzer Reading
SCF = Site Correction Factor

The Site Correction Factor (SCF) used in the above equation is determined empirically, and is expressed in the following equation:

$$SCF(dB/m) = -PG(dB) + AF(dB/m) + CL(dB)$$

SCF = Site Correction Factor
PG = Pre-Amplifier Gain
AF = Antenna Factor
CL = Cable Loss

The field intensity in microvolts per meter can then be determined according to the following equation:

$$FI(\mu V/m) = 10^{FI(dB\mu V/m)/20}$$

For example, assume a signal frequency of 125 MHz has a received level measured as 49.3 dBuV. The total Site Correction Factor (antenna factor plus cable loss minus preamplifier gain) for 125 MHz is –11.5 dB/m. The actual radiated field strength is calculated as follows:

$$49.3dB\mu V - 11.5dB/m = 37.8dB\mu V/m$$
$$10^{37.8/20} = 10^{1.89} = 77.6\mu V/m$$

9.1.3 Measurement Uncertainty

Rhein Tech Laboratories, Inc. has implemented procedures to minimize errors that occur from test instruments, calibration, procedures, and test setups. Test instrument and calibration errors are documented from the manufacturer or calibration lab. Other errors have been defined and calculated within the Rhein Tech Quality Manual, Section 6.1. Rhein Tech implements the following procedures to minimize errors that may occur: yearly as well as daily calibration methods, technician training, and emphasis to employees on avoiding error.

9.1.4 Test Limits

FCC Class B Radiated Emissions	
Frequency (MHz)	**At 3m (dBμV/m)**
30-88	40.0
88-216	43.5
216-960	46.0
> 1000	54

9.1.5 Radiated Emissions Data – Mode RX/Standby, Limit/Distance FCC B/3M

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
44.000	Qp	V	45	1.0	53.8	-19.4	34.4	40.0	-5.6
44.000	Qp	V	160	2.5	51.9	-19.4	32.5	40.0	-7.5
52.000	Qp	V	90	1.0	56.7	-21.9	34.8	40.0	-5.2
52.000	Qp	V	350	2.0	58.9	-21.9	37.0	40.0	-3.0
56.000	Qp	H	0	1.5	47.2	-22.1	25.1	40.0	-14.9
56.000	Qp	V	160	1.0	51.0	-22.7	28.3	40.0	-11.7
60.000	Qp	H	350	3.0	53.2	-23.0	30.2	40.0	-9.8
60.000	Qp	V	90	1.0	54.9	-23.1	31.8	40.0	-8.2
168.000	Qp	V	90	1.0	43.7	-17.7	26.0	43.5	-17.5
168.014	Qp	H	250	1.0	44.6	-18.0	26.6	43.5	-16.9
180.000	Qp	V	0	2.0	52.6	-18.3	34.3	43.5	-9.2
180.012	Qp	H	45	2.0	57.7	-18.6	39.1	43.5	-4.4
300.024	Qp	H	90	1.0	51.4	-13.3	38.1	46.0	-7.9
300.026	Qp	V	160	1.0	45.0	-13.7	31.3	46.0	-14.7
500.055	Qp	H	180	1.5	45.6	-8.0	37.6	46.0	-8.4
500.068	Qp	V	90	1.0	44.5	-8.3	36.2	46.0	-9.8

Table 9-1: Test Equipment for Testing Radiated Emissions

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due
900969	Hewlett Packard	85650A	Quasi-Peak Adapter (30 Hz – 40 GHz)	2412A00414	8/3/06
900931	Hewlett Packard	8566B	Spectrum Analyzer (100 Hz – 22 GHz)	3138A07771	8/3/06
901053	Schaffner-Chase	CBL6112	Antenna (25 MHz – 2 GHz)	2648	11/1/06
900930	Hewlett Packard	85662A	Spectrum Analyzer Display	3144A20839	8/3/06
900889	Hewlett Packard	85650A	Quasi-peak Adapter	2521A00743	8/3/06
900889	Hewlett Packard	85685A	RF Preselector (20 Hz – 2 GHz)	3146A01309	4/12/07

TEST PERSONNEL:

Daniel Biggs		July 27, 2006
Test Technician/Engineer	Signature	Date Of Test

10 Conclusion

The data in this measurement report shows that the **M/A-COM, Inc**. Model **OpenSky M-803 Mobile Radio; FCC ID: BV8M803M,** complies with all the requirements of Parts 90, 15 and 2 of the FCC Rules.